

ABSTRACT

The present invention relates to a method for producing middle-chain-length polyhydroxyalkanoate (MCL-PHA) using a *maoC* gene. The producing method of MCL-PHA according to the present invention comprises the steps of transforming a microorganism with the *maoC* gene to give a transformant, the microorganism being deleted of a *fadB* gene and containing a PHA synthase gene; culturing the transformant in medium containing a C₆₋₁₀ carbon source; and obtaining PHA consisting of monomers with 6-10 carbon atoms.

When the *maoC* gene whose function has not yet been established is used according to the present invention, high quality PHA with a higher number of carbon atoms than the prior PHA can be produced at a higher efficiency.